This Week in SP211:1151 Homework, etc.

Homework must be submitted stapled in single day assignment groupings .

Always attempt to complete the readings before class. You are responsible for reading 10 pages past the current lecture. You may not understand the material completely, but you must read it prior to lecture.

Problems to submit on the date listed:

Week of 10 Sept

Monday :	read chapter 4 completely
	Prepare statements of Newton's Laws
Tuesday:	complete prelab, print writeup
Thursday:	4: Q3, Q7, Q10, 7, 19, 26 no Q => Problem
Friday:	4: Q13, 36, 39, 40 (also find the magnitude of the normal force)
Monday :	4: Q19, 45, 46,52

Hints

Auxiliary Problems

A6 Oval Exercise. Draw a large oval and label points corresponding to the ones below. A particles travels around the oval path at a uniform speed. Consider the position of the particle a short time Δt before it is at the point A and at Δt after it passes A. Draw the displacement that occurs in the interval $t_A - \Delta t$ to $t_A + \Delta t$. What is the direction of the velocity at time t_A ? Repeat for points B and C. Make a general statement about the direction of the instantaneous velocity of a particle in relation to the path that it follows. Represent the velocity at times $t_A - \Delta t$ and $t_A + \Delta t$. What is the direction of the change in velocity during this time interval ? Repeat at B and C. As long as a particle travels at constant speed, $\Delta\vec{v}$ is perpendicular to the path. Do your drawings support this conclusion ? For the 2 Δt interval about which point is the magnitude of $\Delta\vec{v}$ the largest ? ... the smallest ? As the particle is traveling at constant speed, a small change $\Delta\vec{v}$ perpendicular to $\vec{v}$ does not change its magnitude (to first order). What does it change ? How would $\Delta\vec{v}$ be directed if the particle were increasing its speed ? Decreasing ? Repeat the graphical exercise above at point B for a particle that is increasing its speed. Resolve $\Delta\vec{v}$ into components perpendicular and parallel to $\vec{v}$.

THIS IS A SMALL OVAL; DRAW A LARGE ONE !